

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:** Kashmiri *et al.*

**Application No.** 10/519,580

**Filed:** December 27, 2004

**Confirmation No.** 3640

**For:** HUMANIZED ANTI-TAG 72 CC49 FOR  
DIAGNOSIS AND THERAPY OF HUMAN  
TUMORS

**Examiner:** Not yet assigned

**Art Unit:** Not yet assigned

**Attorney Reference No.** 4239-66176-05

CERTIFICATE OF MAILING

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: MAIL STOP PCT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Agent  
for Applicant(s)



Date Mailed July 8, 2005

MAIL STOP PCT  
COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

**RESPONSE TO NOTIFICATION OF MISSING REQUIREMENTS**

This responds to the Notification of Missing Requirements under 35 U.S.C. §371 ("Notification") dated May 11, 2005, for the above-referenced patent application. The Notification requests an oath or declaration of the inventors, in compliance with 37 C.F.R §1.497(a) and (b), along with payment of a surcharge of \$130.00 for late submission of the oath or declaration. A Combined Declaration and Power of Attorney in compliance with 37 C.F.R §1.497(a) and (b) and the required fee are submitted herewith.

The Notification also requests payment of additional claim fees of \$200.00 for one independent claim over three. Applicants submit that only three independent claims were pending at the time this application was submitted to the United States Patent and Trademark Office (USPTO). Attached as **Exhibit A** is a copy of a Preliminary Amendment submitted to the USPTO with this U.S. National Phase patent application on December 27, 2004. Beginning on page 3 of the Preliminary Amendment is a listing of claims in which claims 1-4, 6, 8, 10-12, 16, 20-28, 32-35, 44-45, 47-48, 52, 56 and 67 are shown to be pending. Following entry of the

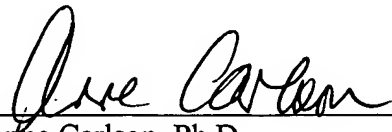
Preliminary Amendment, a total of 30 claims are pending, with only three independent claims: claims 1, 20 and 23. Attached as **Exhibit B** is a copy of the Transmittal Letter submitted to the USPTO with this U.S. National Phase patent application and the Preliminary Amendment (Exhibit A) on December 27, 2004. Page 2 of the Transmittal Letter includes the fee calculation for the total number of claims, including \$500.00 for ten extra independent claims. The total filing fee due was \$1,540.00, and a check for this amount was submitted to the USPTO along with the application and the Preliminary Amendment.

Applicants believe that no additional claim fees are due. However, if the USPTO determines that additional fees are due, the Director is hereby authorized to charge any such fees to the Deposit Account referenced on the accompanying Transmittal Letter.

If any minor matters remain to be resolved prior to examination of this application, please contact the undersigned at the telephone number listed below.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By   
Arne Carlson, Ph.D.  
Registration No. 47,472

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 226-7391  
Facsimile: (503) 228-9446

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:** Kashmiri *et al.***Application No.** 10/519,580**Filed:** December 27, 2004**Confirmation No.** 3640**For:** HUMANIZED ANTI-TAG 72 CC49 FOR  
DIAGNOSIS AND THERAPY OF HUMAN  
TUMORS**Examiner:** Not yet assigned**Art Unit:** Not yet assigned**Attorney Reference No.** 4239-66176-05CERTIFICATE OF MAILING

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: MAIL STOP PCT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Agent  
for Applicant(s)Date Mailed July 8, 2005MAIL STOP PCT  
COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450MISSING REQUIREMENTS TRANSMITTAL LETTER

Enclosed for filing in the application referenced above are the following:

- ☒ Copy of Notification of Missing Requirements under 35 U.S.C. §371
  - ☒ Response to Notification of Missing Requirements
    - ☒ Exhibits A and B
  - ☒ Combined Declaration and Power of Attorney
  - ☒ Surcharge for Late Filing of Fee or Oath or Declaration
    - ☒ \$130.00 – Large Entity
  - ☒ A check in the amount of \$130.00 to cover the above-listed fees
- 
- ☒ The Director is hereby authorized to charge any additional fees that may be required, or credit over-payment, to Deposit Account No. 02-4550. A copy of this sheet is enclosed.
  - ☒ Please return the enclosed postcard to confirm that the items listed above have been received.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By



Anne Carlson, Ph.D.

Registration No. 47,472

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 226-7391 / Facsimile: (503) 228-9446  
cc: Docketing



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

MLH / SAS / NMS

U.S. APPLICATION NUMBER NO. 10/519,580	FIRST NAMED APPLICANT Syed V S Kashmiri	ATTY. DOCKET NO. 4239-66176-05
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36218  
 KLARQUIST SPARKMAN, LLP  
 121 S.W. SALMON STREET, SUITE #1600  
 ONE WORLD TRADE CENTER  
 PORTLAND, OR 97204-2988

DOCKETED FOR

7/11/05 12/11/05

INTERNATIONAL APPLICATION NO.
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PCT/US03/20367

I.A. FILING DATE 06/26/2003	PRIORITY DATE 06/28/2002
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COMPUTER B

BOOK

SCAN B

CC:

CONFIRMATION NO. 3640

371 FORMALITIES LETTER



\*OC000000015982598\*

Date Mailed: 05/11/2005

### NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 12/27/2004
- Copy of the International Search Report filed on 12/27/2004
- Preliminary Amendments filed on 12/27/2004
- Information Disclosure Statements filed on 12/27/2004
- Biochemical Sequence Diskette filed on 12/27/2004
- Biochemical Sequence Listing filed on 12/27/2004
- Request for Immediate Examination filed on 12/27/2004
- U.S. Basic National Fees filed on 12/27/2004
- Assignment filed on 12/27/2004
- Power of Attorney filed on 12/27/2004

The applicant needs to satisfy supplemental fees problems indicated below.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Additional claim fees of \$200 as a non-small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- \$130 Surcharge for providing the oath or declaration later than 30 months from the priority date (37 CFR 1.492(e)) is required.

**SUMMARY OF FEES DUE:**

Total additional fees required for this application is **\$330** for a Large Entity:

- **\$130** Late oath or declaration Surcharge.
- Total additional claim fee(s) for this application is **\$ 200**
  - **\$200** for 1 independent claims over 3.

**ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

SHELBY J VIGIL

Telephone: (703) 308-9140 EXT 224

**PART 2 - OFFICE COPY**

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/519,580	PCT/US03/20367	4239-66176-05

STOP PCT/PTO

11 JUL 2005

EXPRESS MAIL LABEL NO. EV352377100US

Date of Deposit: December 27, 2004

Attorney Reference Number 4239-66176-05

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:** Kashmiri et al.

**Application No.** Not yet assigned

**Filed:** Herewith

**Confirmation No.** Not yet assigned

**For:** HUMANIZED ANTI-TAG 72 CC49 FOR  
DIAGNOSIS AND THERAPY OF HUMAN  
TUMORS

**Examiner:** Not yet assigned

**Art Unit:** Not yet assigned

**Attorney Reference No.** 4239-66176-05

CERTIFICATE OF EXPRESS MAILING

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as Express Mail Label No. EV352377100US in an envelope addressed to: MAIL STOP PCT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Agent  
for Applicant(s)

Date Mailed December 27, 2004

MAIL STOP PCT  
COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

PRELIMINARY AMENDMENT

Prior to examination of the above-referenced patent application, please enter the Article 34 amendments and amend the application as follows:

**Amendments to the Specification** begin on page 2.

**Amendments to the Claims** are reflected in the listing of claims, which begins on page 3.

**Remarks** begin on page 8.



**Amendments to the Specification**

Please replace the paragraph beginning at page 1, line 4, with the following rewritten paragraph:

**--PRIORITY CLAIM**

This ~~application~~ is the § 371 U.S. National Stage of International Application No. PCT/US2003/020367, filed June 26, 2003, which was published in English under PCT Article 21(2), which in turn claims the benefit of U.S. Provisional Application No. 60/393,077, filed June 28, 2003, which is incorporated herein by reference.--

Please insert the attached Abstract as page 64 of the specification.

Please replace the existing sequence listing with the enclosed sequence listing.

Claims

1. (currently amended) A ~~variant~~ humanized CC49 antibody, comprising:  
a light chain complementarity determining region (L-CDR)1, a L-CDR2, and a L-CDR3, a heavy chain complementarity determining region (H-CDR)1, a H-CDR2, and a H-CDR3,

wherein a L-CDR3 of the ~~variant~~ humanized CC49 antibody or of a functional fragment of the ~~variant~~ humanized CC49 antibody comprises a non-conservative amino acid substitution, and wherein the ~~variant~~ humanized CC49 antibody has a high binding affinity for TAG-72, compared to a parent CC49 antibody.

2. (currently amended) The ~~variant~~ antibody of claim 1, wherein the non-conservative substitution is a tyrosine to proline substitution.

3. (currently amended) The ~~variant~~ antibody of claim 1, wherein the non-conservative substitution is at position 91.

4. (currently amended) The ~~variant~~ antibody of claim 1, wherein the non-conservative substitution is at a position that corresponds to a ligand contact residue.

5. (canceled)

6. (currently amended) The ~~variant~~ antibody of claim 1, wherein the L-CDR1 and L-CDR2 are a human antibody L-CDR1 and L-CDR2, respectively.

7. (canceled)

8. (currently amended) The ~~variant~~ antibody of claim 1, wherein the high binding affinity is at least about  $1.2 \times 10^{-8}$  M.

9. (canceled)



10. (currently amended) The ~~variant~~ antibody of claim 1, wherein the antibody is minimally immunogenic.

11. (currently amended) The ~~variant~~ antibody of claim 1, wherein the antibody further comprises an effector molecule.

12. (currently amended) The ~~variant~~ antibody of claim 11, wherein the effector molecule is a detectable label.

13-15. (canceled)

16. (currently amended) The ~~variant~~ antibody of claim 1, further comprising at least one additional non-conservative amino acid substitution in the L-CDR1.

17-19. (canceled)

20. (original) A humanized CC49 antibody, wherein a nucleic acid sequence encoding the antibody has an ATCC Accession number comprising ATCC Accession number PTA-4182 or ATCC Accession number PTA-4183.

21. (currently amended) A nucleic acid molecule encoding the ~~variant~~ humanized monoclonal antibody of claim 1.

22. (original) A vector comprising the nucleic acid of claim 21.

23. (currently amended) A ~~variant~~ humanized CC49 antibody, comprising:  
a variable light framework region and a variable heavy framework region of a human antibody;

a light chain complementarity determining region (L-CDR)1, a L-CDR2, a L-CDR3, a heavy chain complementarity determining region (H-CDR)1, a H-CDR2, and a H-

CDR3, wherein at least one complementarity determining region (CDR) is a human antibody CDR and remaining CDRs are murine CC49 antibody CDRs;

a non-conservative substitution of a first residue, wherein the first residue is in the L-CDR3 of the ~~variant~~ antibody; and

a substitution of a second residue, wherein the second residue is in a any L-CDR or H-CDR of the ~~variant~~ antibody;

wherein the humanized CC49 antibody has a high binding affinity for TAG-72 and is minimally immunogenic, compared to a parent CC49 antibody.

24. (currently amended) The ~~variant~~ antibody of claim 23, wherein the non-conservative substitution of the first residue is a tyrosine to proline substitution.

25. (currently amended) The ~~variant~~ antibody of claim 23, wherein the non-conservative substitution of the first residue is at position 91.

26. (currently amended) The ~~variant~~ antibody of claim 25, wherein the non-conservative substitution of the first residue at position 91 is a tyrosine to proline substitution.

27. (currently amended) The ~~variant~~ antibody of claim 23, wherein the antibody further comprises an effector molecule.

28. (currently amended) The ~~variant~~ antibody of claim 27, wherein the effector molecule is a detectable label.

29-31. (canceled)

32. (currently amended) A method of detecting a TAG-72-expressing tumor in a subject, comprising:

contacting a sample ~~obtained~~ from the subject in vivo or in vitro with the ~~variant~~ antibody of claim 1 for a sufficient amount of time to form an immune complex; and

detecting the presence of the immune complex, wherein the presence of the immune complex demonstrates the presence of the TAG-72-expressing tumor.

33. (original) The method of claim 32, wherein the tumor is a colorectal tumor, a gastric tumor, a pancreatic tumor, a breast tumor, a lung tumor, an adenocarcinoma, or an ovarian tumor.

34. (currently amended) The method of claim 32, wherein the ~~variant~~ antibody further comprises an effector molecule.

35. (currently amended) The method of claim 34, wherein the effector molecule is a detectable label or a toxin.

36-43. (canceled)

44. (currently amended) A method of treating a subject having a tumor that expresses TAG-72, comprising administering to the subject a therapeutically effective amount of the ~~variant~~ antibody of claim 1, wherein administering the therapeutically effective amount of the ~~variant~~ antibody of claim 1 inhibits the growth of the tumor or reduces the size of the tumor, thereby treating the subject.

45. (currently amended) The method of claim 44, wherein the administration of a therapeutically effective amount of the ~~variant~~ antibody of claim 1 does not elicit a human anti-murine antibody response in a subject.

46. (canceled)

47. (currently amended) The method of claim 44, wherein the ~~variant~~ antibody further comprises an effector molecule.

48. (currently amended) The method of claim 47, wherein the effector molecule is a toxin or a radioactive isotope.

49–51. (canceled)

52. (currently amended) A pharmaceutical composition comprising a therapeutically effective amount of the ~~variant~~ antibody of claim 1 in a pharmaceutically acceptable carrier.

53–55. (canceled)

56. (currently amended) The ~~variant~~ antibody of claim 1, wherein the parent ~~humanized~~ CC49 antibody is HuCC49V10.

57–66. (canceled)

67. (currently amended) The ~~variant~~ antibody of claim 23, wherein the non-conservative substitution of the first residue at position 91 is a tyrosine to proline substitution, the substitution of the second residue at position 27b is a valine to leucine substitution, the L-CDR1, L-CDR2, L-CDR3, H-CDR1, H-CDR2, and H-CDR3 are the parent CC49 antibody L-CDR1, L-CDR2, L-CDR3, H-CDR1, H-CDR2, and H-CDR3, respectively, and the parent CC49 antibody is HuCC49V10.

**Remarks**

By this amendment the specification has been changed to reflect prior related applications and to add an abstract on a separate page. The sequence listing has been replaced with a new sequence listing including a reference to the parent PCT application.

An amendment under Article 34 was submitted to the International Preliminary Examining Authority on July 21, 2004, a copy of which is enclosed. Please enter the Article 34 amendment prior to entering the present amendment. The listing of claims set forth above are based on the claims as amended under Article 34. Further amendments are indicated herein. Claims 5, 7, 9, 13-15, 17-19, 29-31, 36-43, 46, 49-51, 53-55, 57-66 are canceled herein, solely to reduce filing fees. Claims 1-4, 6, 8, 10-12, 16, 21, 23-28, 32, 34-35, 44-45, 47, 48, 52, 56, and 67 are amended herein. Support for the amendment of claims 1-4, 6, 8, 10-12, 16, 21, 23-28, 32, 34-35, 44-45, 47, 48, 52, 56, and 67 can be found throughout the specification and at least at page 2, lines 19-20. Support for the amendment of claim 32 can be found in the specification at page 31, lines 26-27. Following entry of this amendment, claims 1-4, 6, 8, 10-12, 16, 20-28, 32-35, 44-45, 47, 48, 52, 56, and 67 are pending.

No new matter has been added by these amendments. Examination of the subject application is respectfully requested. If any minor matters remain to be resolved prior to examination of the application, please contact the undersigned at the telephone number listed below.

Respectfully submitted,

KLARQUEST SPARKMAN, LLP

By



Anne Carlson, Ph.D.

Registration No. 47,472

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 226-7391  
Facsimile: (503) 228-9446

11 JUL 2005


<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A NATIONAL STAGE FILING UNDER 35 U.S.C. § 371</b>		ATTORNEY'S DOCKET NUMBER 4239-66176-05
		U.S. APPLICATION NO. (If known, see 37 C.F.R. § 1.5) Not yet assigned
INTERNATIONAL APPLICATION NO. PCT/US2003/020367	INTERNATIONAL FILING DATE June 26, 2003	PRIORITY DATE CLAIMED June 28, 2002
TITLE OF INVENTION HUMANIZED ANTI-TAG 72 CC49 FOR DIAGNOSIS AND THERAPY OF HUMAN TUMORS		
APPLICANT(S) FOR DO/EO/US Syed V.S. Kashmiri, Jeffrey Schlom and Eduardo A. Padlan		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. § 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. § 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. § 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. § 371(b) and PCT Articles 22 and 39(1). Items 5, 6, 9 and 21 indicated below are submitted to make this express request.</li> <li>4. <input checked="" type="checkbox"/> The United States has been elected in a Demand for International Preliminary Examination (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. § 371(c)(2)) <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English-language translation of the International Application (35 U.S.C. § 371(c)(2)). <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. § 371(c)(3)) <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau to the United States Receiving Office).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input checked="" type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English-language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. § 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. § 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English-language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. § 371(c)(5)).</li> </ol>		
Items 11 to 21 below concern document(s) or information included:		
<ol style="list-style-type: none"> <li>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 C.F.R. §§ 1.97 and 1.98 and a Form PTO-1449.</li> <li>12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. §§ 3.28 and 3.31 and the Recordal fee of \$40.00 are included.</li> <li>13. <input checked="" type="checkbox"/> A preliminary amendment.</li> <li>14. <input type="checkbox"/> An Application Data Sheet under 37 C.F.R. § 1.76.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input checked="" type="checkbox"/> A Power of Attorney signed by Syed V.S. Kashmiri; a Power of Attorney signed by Jeffrey Schlom; a Power of Attorney signed by Eduardo A. Padlan; and a General Power of Attorney signed by a representative of The Government of the United States of America, as represented by the Secretary, Department of Health and Human Services.</li> <li>17. <input checked="" type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 C.F.R. §§ 1.821 - 1.825; a paper copy of the sequence listing (7 pages); and a Statement in Compliance With 37 C.F.R. § 1.821(f).</li> <li>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. § 154(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English-language translation of the international application under 35 U.S.C. § 154(d)(4).</li> <li>20. <input checked="" type="checkbox"/> Other items or information: <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Abstract on a separate page.</li> <li><input checked="" type="checkbox"/> Written Opinion</li> <li><input checked="" type="checkbox"/> Copy of Article 34 Amendment</li> <li><input checked="" type="checkbox"/> Preliminary Examination Report.</li> <li><input checked="" type="checkbox"/> International Search Report.</li> <li><input checked="" type="checkbox"/> Copies of References Cited (48).</li> </ul> </li> </ol>		

EXHIBIT

tabbles

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DATE OF DEPOSIT: December 27, 2004

U.S. APPLICATION NO. (If known, see 37 C.F.R. § 1.5) <b>Not yet assigned</b>		INTERNATIONAL APPLICATION NO. <b>PCT/US2003/020367</b>		ATTORNEY'S DOCKET NUMBER <b>4239-66176-05</b>	
21. The following fees are submitted:					
<input checked="" type="checkbox"/> a) Basic national fee.....				\$ 300.00	
<input checked="" type="checkbox"/> b) Examination fee.....				\$ 200.00	
<input checked="" type="checkbox"/> c) Search fee.....				\$ 500.00	
TOTAL OF ABOVE CALCULATIONS = .....				\$ 1000.00	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE		
85 - 100	0 /50 =	0	x \$250	\$ 0.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 C.F.R. § 1.492(e)).				\$ 0.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	30 - 20 =	10	x \$50.00	\$ 500.00	
Independent Claims	3 - 3 =	0	x \$200.00	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360.00	\$ 0.00	
TOTAL OF ABOVE CALCULATIONS =				\$ 1500.00	
<input type="checkbox"/> Reduction of 1/2 for filing by small entity. Small entity status is claimed for this application.				\$ 0.00	
SUBTOTAL =				\$ 1500.00	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 C.F.R. §§ 1.492(f)).				\$ 0.00	
TOTAL NATIONAL FEE =				\$ 1500.00	
Fee for recording the enclosed assignment (37 C.F.R. § 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. §§ 3.28, 3.31). \$40.00 per property.				\$ 40.00	
TOTAL FEES ENCLOSED =				\$ 1540.00	
				Amount to be refunded	\$
				Amount to be charged	\$
<p>a. <input checked="" type="checkbox"/> A check in the amount of \$ 1,540.00 to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fees that may be required, or credit any overpayment, to Deposit Account No. <u>02-4550</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input checked="" type="checkbox"/> Please return the enclosed postcard to confirm that the items listed above have been received.</p>					
<p>NOTE: Where an appropriate time limit under 37 C.F.R. § 1.494 or § 1.495 has not been met, a petition to revive (37 C.F.R. § 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</p>					
<p>SEND ALL CORRESPONDENCE TO THE ADDRESS ASSOCIATED WITH <b>CUSTOMER NUMBER 36218</b></p>					
<p>KLARQUIST SPARKMAN, LLP One World Trade Center, Suite 1600 121 S.W. Salmon Street Portland, OR 97204-2988</p>					
<p> SIGNATURE</p>					
<p><u>Anne Carlson, Ph.D.</u> NAME</p>					
<p><u>47-472</u> REGISTRATION NUMBER</p>					

cc: Docketing